

Amendments To The Specification

Please replace the first full paragraph on page 2,  
beginning line 3, with the following amended paragraph:

--As another expedient, there is one which has been developed by the applicant of the present invention. This expedient, as shown in FIGURE I of the accompanying drawing, is of such a construction that the desiccating chamber of the freeze-drying apparatus is formed of a multitude of upright cylindrical tubes 1, 1, ... to cause the liquid material (material prepared in liquid form for desiccation) to freeze on the inner wall surface thereof, which are arranged side by side in bundle at a predetermined space interval; then, a jacket 2 shaped in bucket- or vessel-form for circulating heat medium in and through these upright tubes is mounted around these bundled tubes; thereafter, an inlet tube 20 and an outlet tube 21 of this bucket- or vessel-shaped jacket 2 are connected to the tube-passageway of a heat-exchanger (not shown in the drawing) for circulating the heat medium to thereby cause the heat medium to circulate within the jacket 2, while, at the upper end side of each of the tubes 1, 1, ... , there are communicatively connected a chamber or a duct 3 which communicates with a vacuum exhaust system equipped with a vacuum pump or a cold-trap (CT), and, at the lower end side of each of the tubes 1, 1, there is provided an opening -and -

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closing valve V to hermetically close the tubes, below the valve V of which a recovering chamber 4 is provided by connecting the same to the lower surface side of the jacket 2.--

Please replace the last paragraph on page 6, bridging page 7, with the following amended paragraph:

--In more detail, the present invention could be thought out and completed from the following notions. That is to say, difficulty in the temperature control of the liquid material (material prepared in liquid form for desiccation), when the upright cylindrical tubes are subjected to cooling from their outer peripheries with use of the heat medium, for freezing the liquid material onto the inner wall surface of the upright cylindrical tubes in the cylindrical shape of a predetermined thickness, is due to the fact that the jacket for circulating the heat medium to cool the tubes is formed in the shape of a vessel having a large capacity, in the inner cavity of which a multitude of tubes are well arranged and dippingly placed, so as to cool the multitude of tubes at once. Contrary to this, if a construction is made such that the jacket is formed for each tube to surround the outer periphery of such individual tube concentrically so as to cause the heat medium, which is circulating within the jacket,

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to carry out cooling and heating of the individual tube, there is no necessity for disposing and arranging the tubes within the jacket so as to bring the individual tube into uniform contact with the flow of the heat medium circulating within the jacket. Also, control of the cooling temperature with use of the heat medium, when the liquid material is to be frozen on the inner wall surface of the tubes, can also be done for each tube, whereby the temperature control becomes able to be done easily.--